CV Beam

BRIEF PASSENGER CAR DATA

—1957—

ETHYL CORPORATION

BRIEF PASSENGER CAR DATA

●

1957

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NOTICE

The specifications and adjustments contained in this booklet have been compiled by the Research Laboratories of the Ethyl Corporation from information supplied by manufacturers of motor cars, ignition apparatus, spark plugs, etc. None of this information represents the results of tests at the Research Laboratories of the Ethyl Corporation.

This information covers the essential characteristics, in ready reference form, of the 1957 passenger car models. It is correct at date of publication, but changes may be made from time to time by motor car manufacturers.

Data on horsepower, torque, bmep, etc., are that given by the manufacturer. Methods and technique of testing differ in various engineering departments, so these data are frequently not comparable for different makes of cars.

GENERAL NOTES

Spark Plugs

The spark plug installed and recommended by the factory is shown first in the specifications with the corresponding AC, Auto-Lite or Champion spark plug shown as an alternate. These plugs are designed for average driving conditions. For heavy duty or high speed driving, it may be necessary to use a colder plug in order to obtain satisfactory spark plug life. The necessity for a colder plug is indicated by rapid electrode wear and, in extreme cases, splitting and cracking away of the insulator.

It is sometimes necessary to change to a plug which is hotter than the factory equipment plug for very light service, especially in metropolitan areas. If an engine is not pumping oil and the ignition system is in good condition but the spark plug consistently fouls — the need for a hotter plug is indicated. Caution should be exercised in using hotter than standard plugs as they are likely to cause preignition if the vehicle is subjected to high speed driving.

Periodic cleaning of spark plugs by means of an efficient spark plug cleaner is often advantageous.

Spark plug gaps should be set and maintained at factory setting. Pitted breaker points should be cleaned and, if badly pitted, replaced. Incorrectly set breaker points will affect ignition timing and ignition output.

Ignition Timing

Ignition timing is given in crankshaft degrees and is factory setting. Almost all distributors are provided with some type of adjustment enabling the ignition timing to be reset without disturbing the calibration of the distributor advance mechanism. Retarded ignition timing will eliminate or reduce detonation but will result in decreased performance and fuel economy. Also, in most cases, an ignition setting slightly in advance of the factory setting will result in additional performance and economy, although such an ignition setting will require a fuel of higher antiknock value than the standard setting.

Carburetors

Carburetors should not be adjusted or jets changed except by qualified mechanics. Correct fuel (or float) levels are extremely important to satisfactory performance and fuel economy — factory specifications should be strictly maintained.

Valves

Valve tappet clearances are extremely important. Frequent checking of valve tappet clearances will add materially to the proper functioning and long life of valves.

LIST OF ABBREVIATIONS

AC	AC Spark Plug Division, GMC
Adv	Advance
AL	The Electric Auto-Lite Company
AMA	Automobile Manufacturers Association
ATC	After Top Center
BTC	Before Top Center
Bmep	Brake mean effective pressure
C	Cold (valve adjustment)
Car	Carter (carburetors)
Centrif	Centrifugal
Champ	Champion Spark Plug Company
Clr	Clearance
CNS	Chrome Nickel Steel
DD	Downdraft
Deg	Degrees
DR	Delco-Remy Division, GMC
Eng	Engine
Eqpt	Equipment
Exh	Exhaust
H	Hot (valve adjustment)
HP	Horsepower
Hyd Lifters	Hydraulic Lifters
I	In-head (overhead valves)
Int	Intake
L	L-head
Max	Maximum
No. Cyl	Number of Cylinders
OD	Overdrive
Recm Press	Recommended Pressure (tires)
RP	Rochester Products (carburetors)
SD	Side Draft
Sil	Silchrome
Sgl	Single
Std	Standard
Strom	Stromberg Carburetor Company
TDC	Top Dead Center
Trans	Transmission
Vac	Vacuum

SUMMARY OF CHARACTERISTICS

1957 UNITED STATES PASSENGER CARS

Specifications for Four-Door Sedans

	1956	1957	Change
Number of Makes	19	19	....
Number of Models	50	47	—3
ENGINE CHARACTERISTICS:			
Average Standard Compression Ratio	8.55	8.96	+0.41
Highest Standard Compression Ratio	10.0	10.0	....
Lowest Standard Compression Ratio	7.2	7.2	....
Average Displacement, Cubic Inches	296.7	309.9	+13.2
Average Maximum Brake Horsepower	206.8	236.7	+29.9
Average RPM at Maximum Horsepower	4402	4594	+192
Average Horsepower Per Cubic Inch	0.686	0.751	+0.065
Average Brake Mean Effective Pressure, PSI	148.0	155.1	+7.1
Maximum Horsepower Per Cubic Inch	0.791	0.952	+0.161
Minimum Horsepower Per Cubic Inch	0.535	0.544	+0.009
Average Lb/HP—6 Passenger Sedan	19.07	16.8	—2.27

Rated Horsepower With Standard Compression Ratio:	Number of Models		
Under 75	1	1	0
75-99	0	0	0
100-149	10	6	—4
150-199	8	6	—2
200-249	17	8	—9
250-299	14	17	+3
300-349	0	9	+9

See Curve on Page 34

BUICK

CAR MODEL	Special Series 40	Century Series 60	Super & Roadmaster Series 50 & 70
ENGINE			
No. Cyl-Head Type	V-8-I	V-8-I	V-8-I
Bore and Stroke (in)	4.125 x 3.4	4.125 x 3.4	4.125 x 3.4
Displacement (cu in)	364	364	364
AMA Horsepower	54.45	54.45	54.45
Max Horsepower @ rpm	250 @ 4400 (1)	300 @ 4600	300 @ 4600
Max Torque, lb-ft @ rpm	380 @ 2400 (1)	400 @ 3200	400 @ 3200
Max bmep, lb/sq in	157.4	165.7	165.7
Compression Ratio	9.5 (1)	10.0	10.0
IGNITION			
Spark Plug—Factory Eqpt	AC 44	AC 44	AC 44
Alternate		Champ J-8, AL AR 42	
Spark Plug Gap		.030" to .035"	
Firing Order		1-2-7-8-4-5-6-3	
Distributor—Make and Model		Delco-Remy 1110870	
Breaker Gap		.0125" to .0175"	
Cam Angle	30°	30°	30°
Timing—Crankshaft Degrees	5° BTC	5° BTC	5° BTC
Adv Deg—Centrif—Vac	26-1/2—19-1/2	26-1/2—19-1/2	26-1/2—19-1/2
Adv Begins—Ends—Eng rpm	625-3750	625-3750	625-3750
Battery—Volts, Terminal Ground	12, Negative	12, Negative	12, Negative
VALVES			
Size and Material Int		1.875", SAE 8645	
Exh		1.437", Sil 10, 2155N or 21-4NS	
Tappet Clr—Seat Angle Int		Hydraulic Lifters, 45°	
Exh		Hydraulic Lifters, 45°	
CARBURETOR			
Make, Model	Car WGD or Strom WW	Car AFB or RP 4GC	
Type	Dual DD	4 Barrel DD	
Float Level	(2)	(3)	(3)
Choke Control	Automatic	Automatic	Automatic
TRANSMISSION AXLE RATIO			
Conventional Axle Ratio	Std. 3.58		
Overdrive Axle Ratio			
Automatic Axle Ratio	Opt. 3.07	Std. 3.07	Std. 3.07
Make Automatic (see page 30)	Dynaflow	Dynaflow	Dynaflow
CAPACITY			
Oil (Refill) (qt)	5	5	5
Water (includes heater) (qt)	18	18	18
Conventional Transmission (pt)	2-1/2		
Auto. Transmission (Refill) (qt)	11	11	11
Rear Axle (pt)	6	6	6
Gasoline (gal)	20	20	20
GENERAL DATA (Four-Door Sedan)			
Wheelbase (in)	122	122	127.5
Over-All Lgth Incl Bumpers (in)	208.4	208.4	215.3
Shipping Weight (lb)	4001	4156	4354 (4)
Tire Size—Recm Press (lb)	7.10x15-24-24 (5)	7.60x15-24-24	(6)

(1) Hp, torque, bmep and comp. ratio for engines equipped with Dynaflow. For conventional transmission the comp. ratio is 8.0 and power figures are not available.

(2) Stromberg WW: 7/32" from top of float chamber without gasket to top of float. Carter WGD: 1/4" vertical distance between top of float and machined surface of casting.

(3) Rochester 4GC: 1-3/8" between bottom of float and bowl cover gasket with bowl cover inverted. Carter AFB: 7/32" clearance between top of outer end of float and air horn gasket.

(4) Roadmaster 4469.

(5) 7.60x15-24-24; optional.

(6) Super 7.60x15-24-24; Roadmaster 8.00x15-24-24.

CAR MODEL	62	60S	75
ENGINE			
No. Cyl-Head Type	V-8-I	V-8-I	V-8-I
Bore and Stroke (in)	4.00 x 3.625	4.00 x 3.625	4.00 x 3.625
Displacement (cu in)	365	365	365
AMA Horsepower	51.2	51.2	51.2
Max Horsepower @ rpm	300 @ 4800 (1)	300 @ 4800	300 @ 4800
Max Torque, lb-ft @ rpm	400 @ 2800 (1)	400 @ 2800	400 @ 2800
Max bmep, lb/sq in	165.2	165.2	165.2
Compression Ratio	10.0	10.0	10.0
IGNITION			
Spark Plug—Factory Eqpt	AC 44	AC 44	AC 44
Alternate		AL AR 42, Champ J-8	
Spark Plug Gap	.035"	.035"	.035"
Firing Order		1-8-4-3-6-5-7-2	
Distributor—Make and Model		Delco-Remy 1110876	
Breaker Gap	.016"	.016"	.016"
Cam Angle	31° ± 1-1/2°	31° ± 1-1/2°	31° ± 1-1/2°
Timing—Crankshaft Degrees	5° BTC	5° BTC	5° BTC
Adv Deg—Centrif—Vac	24-24	24-24	24-24
Adv Begins—Ends—Eng rpm	500-4140	500-4140	500-4140
Battery—Volts, Terminal Ground	12, Negative	12, Negative	12, Negative
VALVES			
Size and Material—Int		1.875", SAE 8645 or SAE 3140	
Exh		1.437", Sil X-10 or 2112N	
Tappet Clr—Seat Angle—Int		Hydraulic Lifters, 45°	
Exh		Hydraulic Lifters, 45°	
CARBURETOR			
Make, Model		Car AFB or RP 4GC	
Type		DD, 4 Barrel (2)	
Float Level		Car NA; RP 1-3/8" (3)	
Choke Control	Automatic	Automatic	Automatic
TRANSMISSION AXLE RATIO			
Conventional Axle Ratio			
Overdrive Axle Ratio			
Automatic Axle Ratio	Std. 3.07 (4)	Std. 3.07 (4)	Std. 3.36 (5)
Make Automatic (see page 30)	Hydra-Matic	Hydra-Matic	Hydra-Matic
CAPACITY			
Oil (Refill) (qt)	5	5	5
Water (includes heater) (qt)	20.5	20.5	20.5
Conventional Transmission (pt)			
Auto. Transmission (Refill) (qt)	11	11	11
Rear Axle (pt)	5	5	5
Gasoline (gal)	20	20	20
GENERAL DATA (Four-Door Sedan)			
Wheelbase (in)	129.5	133	149.75
Over-All Lgth Incl Bumpers (in)	215.9 (6)	224.4	236.2
Shipping Weight (lb)	4595	4755	NA
Tire Size—Recm Press (lb)	8.00x15-24-24 (7)		8.20x15-28-28

(1) Q engine using two 4 barrel carburetors optional on Eldorado and standard on Brougham. 325 bhp @ 4800, 400 lb-ft @ 3300.
(2) Q engine uses 2 Carter WCFB carburetors.
(3) Carter: Distance between top of float and air horn gasket.
Rochester: Distance between bottom of float and bowl cover gasket.
(4) 3.36 ratio optional on 60 and 62 Series and standard on air conditioned cars and on all Q engine equipped cars.
(5) 3.77 ratio optional on all model 75 cars.
(6) Coupes and convertibles 220.9; Eldorado 222.1.
(7) All white sidewall tires are 8.20 x 15.

CHEVROLET

CAR MODEL	Six	Turbo-Fire 265 V-8	Turbo-Fire 283 V-8
ENGINE			
No. Cyl-Head Type	6-I	V-8-I	V-8-I
Bore and Stroke (in)	3-9/16x3-15/16	3-3/4 x 3	3-7/8 x 3
Displacement (cu in)	235.5	265	283
AMA Horsepower	30.4	45.0	48.0
Max Horsepower @ rpm	140 @ 4200	162 @ 4400	185 @ 4600 (1)
Max Torque, lb-ft @ rpm	210 @ 2400	257 @ 2400	275 @ 2400 (1)
Max bmep, lb/sq in	134.5	146.2	146.5
Compression Ratio	8.0	8.0	8.5 (1)
IGNITION			
Spark Plug—Factory Eqpt	AC 44	AC 44	AC 44
Alternate		AL AR 52, Champ J-8	
Spark Plug Gap	.035"	.035"	.035"
Firing Order	1-5-3-6-2-4	1-8-4-3-6-5-7-2	
Distributor—Make and Model	DR 1112403	DR 1110874	
Breaker Gap	.016"	.016"	.016"
Cam Angle	28° to 35°	28° to 32°	28° to 32°
Timing—Crankshaft Degrees	TDC	4° BTC	4° BTC
Adv Deg—Centrif—Vac	26-15	32-22	32-22
Adv Begins—Ends—Eng rpm	600-3500	600-3600	600-3600
Battery—Volts, Terminal Ground	12, Negative	12, Negative	12, Negative
VALVES			
Size and Material—Int	1.875", 8645	1.72", 8645	1.72", 8645
Exh	1.50", MXCR	1.50", MXCR	1.50", MXCR
Tappet Clr—Seat Angle—Int	Hyd. Lifters, 30°	Hyd. Lifters, 45°	
Exh	Hyd. Lifters, 45°	Hyd. Lifters, 45°	
CARBURETOR			
Make, Model	RP 7009657	RP 7010647	RP 7010648
Type	Sgl DD	Dual DD	Dual DD
Float Level	1-9/32" (2)	1-1/4" (2)	1-1/4" (2)
Choke Control	Automatic	Automatic	Automatic
TRANSMISSION AXLE RATIO			
Conventional Axle Ratio	Std. 3.55	Std. 3.55	Std. 3.55
Overdrive Axle Ratio	Opt. 4.11	Opt. 4.11	Opt. 4.11
Automatic Axle Ratio	Opt. 3.36		Opt. 3.36
Make Automatic (see page 30)	Powerglide	None	Powerglide or Turboglide
CAPACITY			
Oil (Refill) (qt)	5	4	4
Water (includes heater) (qt)	17	17	17
Conventional Transmission (pt)	2 (3)	2 (3)	2 (3)
Auto. Transmission (Refill) (qt)	5 Powerglide		3-1/2 Turboglide
Rear Axle (pt)	4	4	4
Gasoline (gal)	16	16	16
GENERAL DATA (Four-Door Sedan)			
Wheelbase (in)	115	115	115
Over-All Lgth Incl Bumpers (in)	200.0	200.0	200.0
Shipping Weight (lb)	3275	3273	3270 (4)
Tire Size—Recm Press (lb)	7.50x14-22-22	7.50x14-22-22	7.50x14-22-22

(1) BHP @ RPM	Torque @ RPM	CR	Carburetor
185 @ 4600	275 @ 2400	8.5	2 Barrel
220 @ 4800	300 @ 3000	9.5	4 Barrel
245 @ 5000	300 @ 3800	9.5	2-4 Barrel
250 @ 5000	305 @ 3800	9.5	Fuel Injection
270 @ 6000	285 @ 4200	9.5	2-4 Barrel
283 @ 6200	290 @ 4400	10.5	Fuel Injection

(2) Distance between bottom of float and bowl cover gasket.
(3) One pint additional with overdrive.
(4) Weight with Turboglide, with Powerglide 3399.

CAR MODEL	Windsor	Saratoga	New Yorker
ENGINE			
No. Cyl-Head Type	V-8-I	V-8-I	V-8-I
Bore and Stroke (in)	3.94 x 3.63	3.94 x 3.63	4.0 x 3.9
Displacement (cu in)	354	354	392
AMA Horsepower	49.7	49.7	51.2
Max Horsepower @ rpm	285 @ 4600 (1)	295 @ 4600	325 @ 4600 (2)
Max Torque, lb-ft @ rpm	365 @ 2400 (1)	390 @ 2800	430 @ 2800 (2)
Max bmep, lb/sq in	155.5	166.1	165.4
Compression Ratio	9.25	9.25	9.25 (2)
IGNITION			
Spark Plug—Factory Eqpt	AL AR-42	AL AR-42	AL AGR-42
Alternate	Champ	XJ 12Y	Champ XN 12Y, AC R44XLS
Spark Plug Gap	.035"	.035"	.035"
Firing Order		1-8-4-3-6-5-7-2	
Distributor—Make and Model	AL IBP-4002-A	AL IBP-4002-A	AL IBK-4304
Breaker Gap	.015" to .018"	.015" to .018"	.015" to .018"
Cam Angle	29° to 32°	29° to 32°	29° to 32° per breaker
Timing—Crankshaft Degrees	6° BTC	6° BTC	6° BTC
Adv Deg—Centrif—Vac	26-21	26-21	20-22
Adv Begins—Ends—Eng rpm	800-4100	800-4100	700-4500
Battery—Volts, Terminal Ground	12, Negative	12, Negative	12, Negative
VALVES			
Size and Material—Int	1.94", Sil F	1.94", Sil F	2.00", Sil F
Exh	1.50", 21-4N	1.50", 21-4N	1.75", 21-4N
Tappet Clr—Seat Angle—Int		Hydraulic Lifters, 45°	
Exh		Hydraulic Lifters, 45°	
CARBURETOR			
Make, Model	Car BBD-2527S	Car WCFB-2589S	Car WCFB-2590S
Type	Dual DD	DD 4 Barrel	DD 4 Barrel
Float-Level	9/32" (3)	Pri 1/8"; Sec 1/4" (4)	
Choke Control	Automatic	Automatic	Automatic
TRANSMISSION AXLE RATIO			
Conventional Axle Ratio	Std. 3.73		
Overdrive Axle Ratio			
Automatic Axle Ratio	Opt. 3.18	Std. 3.18	Std. 3.18 (5)
Make Automatic (see page 30)	TorqueFlite	TorqueFlite	TorqueFlite
CAPACITY			
Oil (Refill) (qt)	5	5	5
Water (includes heater) (qt)	22	22	25
Conventional Transmission (pt)	2-3/4		
Auto. Transmission (Refill) (qt)	9	9	10-1/2
Rear Axle (pt)	3-1/2	3-1/2	3-1/2
Gasoline (gal)	23	23	23
GENERAL DATA (Four-Door Sedan)			
Wheelbase (in)	126.0	126.0	126.0
Over-All Lgth Incl Bumpers (in)	219.2	219.2	219.2
Shipping Weight (lb)	3995	4165	4315
Tire Size—Recm Press (lb)	8.50x14-22-22	8.50x14-22-22	9.00x14-22-22

(1) Power package engine as used in Saratoga optional.
(2) C-300 model uses special engine with two 4 barrel carburetors. Bhp 375 @ 5200, 420 lb-ft @ 4000 rpm. With optional 10.0 comp. ratio 390 bhp @ 5400 rpm, 430 lb-ft @ 4200 rpm.
(3) From top of float chamber to top of float.
(4) Between machined surface of bowl cover and nearest point on float.
(5) 2.92 standard in flat areas of country except on air conditioned cars.

CONTINENTAL

CAR MODEL	Mark II
ENGINE	
No. Cyl-Head Type	V-8-I
Bore and Stroke (in)	4.00 x 3.66
Displacement (cu in)	368
AMA Horsepower	51.2
Max Horsepower @ rpm	(1)
Max Torque, lb-ft @ rpm	(1)
Max bmep, lb/sq in	(1)
Compression Ratio	10.0
IGNITION	
Spark Plug—Factory Eqpt	Champ 860
Alternate	AC 84T, AL BRF 42
Spark Plug Gap	.032" to .036"
Firing Order	1-5-4-8-6-3-7-2
Distributor—Make and Model	Holley FEK 12127 C
Breaker Gap	.014" to .016"
Cam Angle	26° to 28.5°
Timing—Crankshaft Degrees	5° BTC
Adv Deg—Centrif—Vac	24-3/4-16
Adv Begins—Ends—Eng rpm	650-4000
Battery—Volts, Terminal Ground	12, Negative
VALVES	
Size and Material—Int	2.00", Silchrome #1
Exh	1.63", Ford Cast Austenitic
Tappet Clr—Seat Angle—Int	Hydraulic Lifters, 45°
Exh	Hydraulic Lifters, 45°
CARBURETOR	
Make, Model	Car WCFB
Type	DD 4 Barrel
Float Level	Primary 1/16", Secondary 3/16" (2)
Choke Control	Automatic
TRANSMISSION AXLE RATIO	
Conventional Axle Ratio	
Overdrive Axle Ratio	
Automatic Axle Ratio	Std. 3.07
Make Automatic (see page 30)	Turbo-Drive
CAPACITY	
Oil (Refill) (qt)	5
Water (includes heater) (qt)	25
Conventional Transmission (pt)	
Auto. Transmission (Refill) (qt)	10
Rear Axle (pt)	4
Gasoline (gal)	25
GENERAL DATA (Four-Door Sedan)	
Wheelbase (in)	126
Over-All Lgth Incl Bumpers (in)	218.4
Shipping Weight (lb)	4800
Tire Size—Recm Press (lb)	8.00x15-26-24 (3)

(1) Engine output specifications not released.
(2) Distance between float and machined surface of bowl cover casting with bowl cover assembly inverted.
(3) 8.20x15 standard on air conditioned cars.

CAR MODEL	Firesweep S-27	Firedome S-25	Fireflite S-26
ENGINE			
No. Cyl-Head Type	V-8-I	V-8-I	V-8-I
Bore and Stroke (in)	3.69 x 3.80	3.78 x 3.80	3.78 x 3.80
Displacement (cu in)	325	341	341
AMA Horsepower	42.2	45.7	45.7
Max Horsepower @ rpm	245 @ 4400 (1)	270 @ 4600	295 @ 4600 (2)
Max Torque, lb-ft @ rpm	320 @ 2400 (1)	350 @ 2400	375 @ 2800 (2)
Max bmep, lb/sq in	148.5	154.8	165.8
Compression Ratio	8.5	9.25	9.25
IGNITION			
Spark Plug—Factory Eqpt	AL AR 42	AL AR 42	AL AR 42
Alternate		Champ XJ 12Y	
Spark Plug Gap	.035"	.035"	.035"
Firing Order		1-8-4-3-6-5-7-2	
Distributor—Make and Model	AL IBP-4002 (1)	AL IBP-4001	AL IBP-4001-A
Breaker Gap	.015" to .018"	.015" to .018"	.015" to .018"
Cam Angle	29° to 32°	29° to 32°	29° to 32°
Timing—Crankshaft Degrees	6° BTC	6° BTC	6° BTC
Adv Deg—Centrif—Vac	17-26	20-30-1/2	18-29-1/2
Adv Begins—Ends—Eng rpm	900-3400	700-3400	700-4600
Battery—Volts, Terminal Ground	12, Negative	12, Negative	12, Negative
VALVES			
Size and Material—Int	1.84", Sil F	1.94", Sil F	1.94", Sil F
Exh	1.47", XCR	1.75", 21-4N	1.75", 21-4N
Tappet Clr—Seat Angle—Int		Hydraulic Lifters, 45°	
Exh		Hydraulic Lifters, 45°	
CARBURETOR			
Make, Model	Strom WW3-150	Car BBD-2522S	Car WCFB-2588S
Type	Dual DD	Dual DD	DD 4 Barrel
Float Level	7/32" (3)	9/32" (4)	Pri 1/8"; Sec 1/4" (5)
Choke Control	Automatic	Automatic	Automatic
TRANSMISSION — **AXLE RATIO**			
Conventional — Axle Ratio	Std. 3.91	Std. 3.91	
Overdrive — Axle Ratio			
Automatic — Axle Ratio	Opt. 3.54	Opt. 3.36	Std. 3.36
Make Automatic (see page 30)	PowerFlite (6)	TorqueFlite	TorqueFlite
CAPACITY			
Oil (Refill) (qt)	5	5	5
Water (includes heater) (qt)	21	21	21
Conventional Transmission (pt)	2-3/4	2-3/4	
Auto. Transmission (Refill) (qt)	10 (7)	8-1/2	8-1/2
Rear Axle (pt)	3-1/2	3-1/2	3-1/2
Gasoline (gal)	20	23	23
GENERAL DATA (Four-Door Sedan)			
Wheelbase (in)	122	126	126
Over-All Lgth Incl Bumpers (in)	215.8	218	218
Shipping Weight (lb)	3675	3955	4025
Tire Size—Recm Press (lb)	8.00x14-22-22	8.50x14-22-22	8.50x14-22-22

(1) With special power package 260 bhp @ 4400, 335 lb-ft at 2800. Power package consists of Carter 4 barrel WCFB-2532S carburetor, dual exhaust system and Auto-Lite IBP-4002-B distributor.
(2) Adventurer model uses special 345 cu. in. engine with two 4 barrel carburetors. Bhp 345 @ 5200 rpm, 355 lb-ft @ 3600 rpm.
(3) From top of float chamber without gasket to top of float.
(4) From top of float chamber without gasket to top of float at center.
(5) Between machined surface of bowl cover and top of float.
(6) TorqueFlite transmission optional.
(7) TorqueFlite transmission requires 8-1/2 quarts.

DODGE

CAR MODEL	Coronet 6	Coronet & Royal V-8	Custom Royal V-8
ENGINE			
No. Cyl-Head Type	6-L	V-8-I	V-8-I
Bore and Stroke (in)	3.25 x 4.63	3.69 x 3.80	3.69 x 3.80
Displacement (cu in)	230	325	325
AMA Horsepower	25.4	43.3	43.3
Max Horsepower @ rpm	138 @ 4000	245 @ 4400 (1) (2)	260 @ 4400 (2)
Max Torque, lb-ft @ rpm	208 @ 1600	320 @ 2400 (1) (2)	320 @ 2400 (2)
Max bmep, lb/sq in	136.4	148.5	155.4
Compression Ratio	8.0	8.5 (2)	8.5 (2)
IGNITION			
Spark Plug—Factory Eqpt	AL AR 51	AL AR 42	AL AR 42
Alternate	J-8, R45	Champ XJ 12Y	
Spark Plug Gap	.035"	.035"	.035"
Firing Order	1-5-3-6-2-4	1-8-4-3-6-5-7-2	
Distributor—Make and Model	AL IBR-4001	AL IBP-4002	AL IBP-4002-B
Breaker Gap	.020"	.015" to .018"	.015" to .018"
Cam Angle	39° ± 3°	29° to 32°	29° to 32°
Timing—Crankshaft Degrees	TDC	6° BTC	6° BTC
Adv Deg—Centrif—Vac	17-19	17-26	16-26
Adv Begins—Ends—Eng rpm	700-3600	900-3400	700-1700
Battery—Volts, Terminal Ground	12, Negative	12, Negative	12, Negative
VALVES			
Size and Material—Int	1.53", Sil F	1.84", Sil F	1.84", Sil F
Exh	1.41", XCR	1.47", XCR	1.47", XCR
Tappet Clr—Seat Angle—Int	.010" H, 45°	Hydraulic Lifters, 45°	
Exh	.010" H, 45°	Hydraulic Lifters, 45°	
CARBURETOR			
Make, Model	Strom WW3-160	Strom WW3-150	Car WCFB-2532S
Type	Dual DD	Dual DD	DD 4 Barrel
Float Level	7/32" (3)	7/32" (3)	Pri 3/16"; Sec 1/4" (4)
Choke Control	Automatic	Automatic	Automatic
TRANSMISSION AXLE RATIO			
Conventional Axle Ratio	Std. 3.90	Std. 3.73	Std. 3.73
Overdrive Axle Ratio			
Automatic Axle Ratio	Opt. 3.73	Opt. 3.54 (5)	Opt. 3.36
Make Automatic (see page 30)	PowerFlite	PowerFlite (5)	TorqueFlite
CAPACITY			
Oil (Refill) (qt)	5	5	5
Water (includes heater) (qt)	14	21	21
Conventional Transmission (pt)	2-3/4	2-3/4	2-3/4
Auto. Transmission (Refill) (qt)	10	10 (5)	9
Rear Axle (pt)	3-1/4	3-1/2	3-1/2
Gasoline (gal)	20	20	20
GENERAL DATA (Four-Door Sedan)			
Wheelbase (in)	122	122	122
Over-All Lgth Incl Bumpers (in)	212.2	212.2	212.2
Shipping Weight (lb)	3470	3620	3690
Tire Size—Recm Press (lb)	7.50x14-24-22	7.50x14-24-22 (6)	8.00x14-22-22

(1) Power package engine as used in Custom Royal available as optional equipment.
(2) D500 engine, 9.25 comp. ratio, 285 bhp @ 4800, 345 lb-ft at 2800 with 4 barrel carburetor or 310 bhp @ 4800 rpm with two 4 barrel carburetors and special camshaft optional.
(3) From top of float chamber without gasket to top of float.
(4) Between machined surface of bowl cover and top of float.
(5) PowerFlite or TorqueFlite transmissions available. Data given for PowerFlite. TorqueFlite data listed under Custom Royal.
(6) 8.00x14-22-22 standard on Royal.

CAR MODEL	All Models Six	Custom V-8 Custom 300 V-8	Fairlane V-8 Fairlane "500" V-8
ENGINE			
No. Cyl-Head Type	6-I	V-8-I	V-8-I
Bore and Stroke (in)	3.62 x 3.60	3.62 x 3.30	3.75 x 3.30
Displacement (cu in)	223	272	292
AMA Horsepower	31.54	42.05	45.0
Max Horsepower @ rpm	144 @ 4200	190 @ 4500 (1)	212 @ 4500 (1)
Max Torque, lb-ft @ rpm	212 @ 2400	270 @ 2800 (1)	297 @ 2700 (1)
Max bmep, lb/sq in	143.4	149.7	153.4
Compression Ratio	8.6	8.6 (1)	9.1 (1)
IGNITION			
Spark Plug—Factory Eqpt	Champ 870	Champ 870	Champ 870
Alternate	85T, BRF 82	85T, BRF 42	84T, BRF 42
Spark Plug Gap	.032" to .036"	.032" to .036"	0.32" to .036"
Firing Order	1-5-3-6-2-4	1-5-4-8-6-3-7-2	
Distributor—Make and Model	Holley FEG 12127 B	Holley FEH 12127 A	
Breaker Gap	.024" to .026"	.014" to .016"	.014" to .016"
Cam Angle	35° to 38°	26° to 28.5°	26° to 28.5°
Timing—Crankshaft Degrees	3° BTC (2)	3° BTC (2)	3° BTC (2)
Adv Deg—Centrif—Vac	25-1/4 (3)	34-1/2-16	34-1/2-16
Adv Begins—Ends—Eng rpm	(3)	775-4000	775-4000
Battery—Volts, Terminal Ground	12, Negative	12, Negative	12, Negative
VALVES			
Size and Material Int	1.78", Sil 1		1.925", Sil 1
Exh	1.51", Ford Cast Austenitic		
Tappet Clr—Seat Angle Int	.019" H, 45°		.019" H, 45°
Exh	.019" H, 45°		.019" H, 45°
CARBURETOR			
Make, Model	Holley	Holley or Ford	Holley or Ford
Type	Sgl DD	Dual DD	Dual DD
Float Level	.306" (4)	(5)	(5)
Choke Control	Manual	Automatic	Automatic
TRANSMISSION AXLE RATIO			
Conventional Axle Ratio	Std. 3.70	Std. 3.56	Std. 3.56
Overdrive Axle Ratio	Opt. 3.89	Opt. 3.70	Opt. 3.70
Automatic Axle Ratio	Opt. 3.10	Opt. 3.10	Opt. 3.10
Make Automatic (see page 30)	Fordomatic	Fordomatic	Fordomatic
CAPACITY			
Oil (Refill) (qt)	4	5	5
Water (includes heater) (qt)	16	20	20
Conventional Transmission (pt)	3 (6)	3 (6)	3 (6)
Auto. Transmission (Refill) (qt)	9	9.5	9.5
Rear Axle (pt)	4.5	4.5	4.5
Gasoline (gal)	20	20	20
GENERAL DATA (Four-Door Sedan)			
Wheelbase (in)	116 (7)	116	118
Over-All Lgth Incl Bumpers (in)	201.7 (7)	201.7	207.7
Shipping Weight (lb)	3226 Custom	3344 Custom	3492 Fairlane
Tire Size—Recm Press (lb)	7.50x14-24-21	7.50x14-24-21	7.50x14-24-21

(1) 312 cu. in., 245 bhp @ 4500 rpm, 332 lb-ft @ 3200 rpm, 9.7 comp. ratio, 4 barrel carburetor engine optional. With two 4 barrel carburetors 270 bhp @ 4800 and with special cam 285 bhp @ 5200.
(2) 3°BTC with standard or overdrive; 6°BTC with Fordomatic.
(3) Full vacuum actuated distributor—advance shown is the maximum at wide open throttle, 4000 rpm.
(4) From roof of float chamber to lowest point on float.
(5) Holley: 3/4" clearance between bottom of float and floor of float bowl. Ford: .450"-.570" from top of end of float to top of float bowl.
(6) Capacity with overdrive, 3 pints refill.
(7) 118" wheelbase, 207.7" over-all for Fairlane and Fairlane "500".

HUDSON

CAR MODEL		Hornet V-8
ENGINE		
No. Cyl-Head Type		V-8-I
Bore and Stroke (in)		4 x 3-1/4
Displacement (cu in)		327
AMA Horsepower		51.2
Max Horsepower @ rpm		255 @ 4700
Max Torque, lb-ft @ rpm		345 @ 2600
Max bmep, lb/sq in		159.1
Compression Ratio		9.0
IGNITION		
Spark Plug—Factory Eqpt		AL AL-7J, Champ H-10
Alternate		AC 45L
Spark Plug Gap		.035"
Firing Order		1-8-4-3-6-5-7-2
Distributor—Make and Model		Delco-Remy 1110887
Breaker Gap		.016"
Cam Angle		26° to 33°
Timing—Crankshaft Degrees		5° BTC
Adv Deg—Centrif—Vac		36-20
Adv Begins—Ends—Eng rpm		600-3800
Battery—Volts, Terminal Ground		12, Negative
VALVES		
Size and Material	Int	1.787", SII 1 or XB
	Exh	1.406", 2112N
Tappet Clr—Seat Angle	Int	Hydraulic Lifters, 30°
	Exh	Hydraulic Lifters, 45°
CARBURETOR		
Make, Model		Car WCFB-2593-SA
Type		DD 4 Barrel
Float Level		Pri 1/8"; Sec 3/16" (1)
Choke Control		Automatic
TRANSMISSION	**AXLE RATIO**	
Conventional	Axle Ratio	Std. 4.10
Overdrive	Axle Ratio	Opt. 4.10
Automatic	Axle Ratio	Opt. 3.15
Make Automatic	(see page 30)	Hydra-Matic
CAPACITY		
Oil (Refill)	(qt)	5
Water (includes heater)	(qt)	20
Conventional Transmission	(pt)	4 (2)
Auto. Transmission (Refill)	(qt)	11.5
Rear Axle	(pt)	4
Gasoline	(gal)	20
GENERAL DATA (Four-Door Sedan)		
Wheelbase	(in)	121-1/4
Over-All Lgth Incl Bumpers	(in)	209-1/4 (3)
Shipping Weight	(lb)	3589
Tire Size—Recm Press	(lb)	8.00x14-24-24

(1) Distance between machined surface of bowl cover and nearest point on float.
(2) 4 pints with overdrive transmission.
(3) 219-1/4" over-all with optional Continental tire.

CAR MODEL	Imperial, Imperial Crown, and Imperial LeBaron
ENGINE	
No. Cyl-Head Type	V-8-I
Bore and Stroke (in)	4.00 x 3.90
Displacement (cu in)	392
AMA Horsepower	51.2
Max Horsepower @ rpm	325 @ 4600
Max Torque, lb-ft @ rpm	430 @ 2800
Max bmep, lb/sq in	165.4
Compression Ratio	9.25
IGNITION	
Spark Plug—Factory Eqpt	AL AGR 42
Alternate	Champ XN 12Y, AC R44XLS
Spark Plug Gap	.035"
Firing Order	1-8-4-3-6-5-7-2
Distributor—Make and Model	Auto-Lite IBK-4304
Breaker Gap	.015" to .018"
Cam Angle	29° to 32° per breaker
Timing—Crankshaft Degrees	6° BTC
Adv Deg—Centrif—Vac	20-22
Adv Begins—Ends—Eng rpm	700-4500
Battery—Volts, Terminal Ground	12, Negative
VALVES	
Size and Material—Int	2.00", Sil F
Exh	1.75", 21-4N
Tappet Clr—Seat Angle—Int	Hydraulic Lifters, 45°
Exh	Hydraulic Lifters, 45°
CARBURETOR	
Make, Model	Car WCFB-2590S
Type	DD 4 Barrel
Float Level	Pri 1/8"; Sec 1/4" (1)
Choke Control	Automatic
TRANSMISSION AXLE RATIO	
Conventional Axle Ratio	
Overdrive Axle Ratio	
Automatic Axle Ratio	Std. 3.18 (2)
Make Automatic (see page 30)	TorqueFlite
CAPACITY	
Oil (Refill) (qt)	5
Water (includes heater) (qt)	25
Conventional Transmission (pt)	
Auto. Transmission (Refill) (qt)	10-1/2
Rear Axle (pt)	3-1/2
Gasoline (gal)	23
GENERAL DATA (Four-Door Sedan)	
Wheelbase (in)	129.0
Over-All Lgth Incl Bumpers (in)	224.0
Shipping Weight (lb)	4640 (3)
Tire Size—Recm Press (lb)	9.50x14-22-22

(1) Between machined surface of bowl cover and nearest point on float.
(2) 2.92 standard in flat areas of country except on air conditioned cars.
(3) Crown Imperial 4740, Imperial LeBaron 4765.

LINCOLN

CAR MODEL	Capri and Premiere
ENGINE	
No. Cyl-Head Type	V-8-I
Bore and Stroke (in)	4.00 x 3.66
Displacement (cu in)	368
AMA Horsepower	51.20
Max Horsepower @ rpm	300 @ 4800
Max Torque, lb-ft @ rpm	415 @ 3000
Max bmep, lb/sq in	170.0
Compression Ratio	10.0
IGNITION	
Spark Plug—Factory Eqpt	Champ 860
Alternate	AC 84T, AL BRF 42
Spark Plug Gap	.032" to .036"
Firing Order	1-5-4-8-6-3-7-2
Distributor—Make and Model	Holley 12127 A
Breaker Gap	.014" to .016"
Cam Angle	26° to 28.5°
Timing—Crankshaft Degrees	5° BTC
Adv Deg—Centrif—Vac	24-3/4-16
Adv Begins—Ends—Eng rpm	650-4000
Battery—Volts, Terminal Ground	12, Negative
VALVES	
Size and Material—Int	2.00", Silchrome #1
Exh	1.63", Ford Cast Austenitic
Tappet Clr—Seat Angle—Int	Hydraulic Lifters, 45°
Exh	Hydraulic Lifters, 45°
CARBURETOR	
Make, Model	Car WCFB-2404S
Type	DD 4 Barrel
Float Level	Primary 1/16", Secondary 3/16" (1)
Choke Control	Automatic
TRANSMISSION AXLE RATIO	
Conventional Axle Ratio	
Overdrive Axle Ratio	
Automatic Axle Ratio	Std. 3.07 (2)
Make Automatic (see page 30)	Turbo-Drive
CAPACITY	
Oil (Refill) (qt)	5
Water (includes heater) (qt)	25
Conventional Transmission (pt)	
Auto. Transmission (Refill) (qt)	10
Rear Axle (pt)	4
Gasoline (gal)	20
GENERAL DATA (Four-Door Sedan)	
Wheelbase (in)	126
Over-All Lgth Incl Bumpers (in)	224.6
Shipping Weight (lb)	4527
Tire Size—Recm Press (lb)	8.00x15-24-24 (3)

(1) Distance between float and machined surface of bowl cover casting with bowl cover assembly inverted.
(2) 3.31 axle optional. 3.31 standard on air conditioned cars.
(3) 8.20x15 standard on air conditioned cars.

CAR MODEL	Monterey Montclair 312	Monterey Montclair 368
ENGINE		
No. Cyl-Head Type	V-8-I	V-8-I
Bore and Stroke (in)	3.80 x 3.44	4.00 x 3.66
Displacement (cu in)	312	368
AMA Horsepower	46.21	51.20
Max Horsepower @ rpm	255 @ 4600	290 @ 4600
Max Torque, lb-ft @ rpm	340 @ 3000	405 @ 2800
Max bmep, lb/sq in	164.3	166.0
Compression Ratio	9.75	9.75
IGNITION		
Spark Plug—Factory Eqpt	Champ 860	Champ 860
Alternate	AC 84T, AL BRF 42	
Spark Plug Gap	.032" to .036"	.032" to .036"
Firing Order	1-5-4-8-6-3-7-2	
Distributor—Make and Model	Holley FEK 12127 A	Holley FEL 12127 A
Breaker Gap	.014" to .016"	.014" to .016"
Cam Angle	26° to 28.5°	26° to 28.5°
Timing—Crankshaft Degrees	3° BTC (1)	5° BTC
Adv Deg—Centrif—Vac	23-3/4-16	24-3/4-16
Adv Begins—Ends—Eng rpm	800-4000	650-4000
Battery—Volts, Terminal Ground	12, Negative	12, Negative
VALVES		
Size and Material ..... Int	1.925", Sil 1	2.0", Sil 1
Exh	1.51", Ford Cast Austenitic	1.635", Ford Cast Austenitic
Tappet Clr—Seat Angle ..... Int	.019" H, 45°	Hyd. Lifters, 45°
Exh	.019" H, 45°	Hyd. Lifters, 45°
CARBURETOR		
Make, Model	Car AFB or Holley 4150	Car WCFB-2404S
Type	DD 4 Barrel	DD 4 Barrel
Float Level	(2)	(3)
Choke Control	Automatic	Automatic
TRANSMISSION AXLE RATIO		
Conventional Axle Ratio	Std. 3.70	Std. 3.70
Overdrive Axle Ratio	Opt. 3.89	Opt. 3.89
Automatic Axle Ratio	Opt. 2.91	Opt. 2.91
Make Automatic (see page 30)	Merc-O-Matic	Merc-O-Matic
CAPACITY		
Oil (Refill) ..... (qt)	5	5
Water (includes heater) .... (qt)	21	24
Conventional Transmission. (pt)	3-1/4 (4)	3-1/4 (4)
Auto. Transmission (Refill). (qt)	10-1/2	10-1/2
Rear Axle ..... (pt)	5	5
Gasoline ..... (gal)	20	20
GENERAL DATA (Four-Door Sedan)		
Wheelbase ..... (in)	122	122
Over-All Lgth Incl Bumpers. (in)	211.1	211.1
Shipping Weight ..... (lb)	3969 (5)	4052 (5)
Tire Size—Recm Press..... (lb)	8.00x14-23-21	8.00x14-23-21

(1) 3°BTC on all models with std. transmission; 6°BTC with Merc-O-Matic transmissions.
(2) Carter: 5/32" clearance between top of float and air horn gasket. Holley: 13/16" Primary, 3/4" Secondary. Distance from bottom of float at end to bottom of float bowl.
(3) Primary 1/16", Secondary 3/16". Distance between machined surface of bowl cover and nearest point on float with bowl cover assembly inverted.
(4) 4-1/2 pints with overdrive.
(5) Weight given for standard transmission car.

NASH

CAR MODEL	Ambassador V-8	Nash-Hudson Metropolitan
ENGINE		
No. Cyl-Head Type	V-8-I	4-I
Bore and Stroke (in)	4 x 3-1/4	2-7/8 x 3-1/2
Displacement (cu in)	327	90.89
AMA Horsepower	51.2	13.22
Max Horsepower @ rpm	255 @ 4700	52 @ 4500
Max Torque, lb-ft @ rpm	345 @ 2600	77 @ 2500
Max bmep, lb/sq in	159.1	127.7
Compression Ratio	9.0	7.2
IGNITION		
Spark Plug—Factory Eqpt	AL AL-7J,Champ H-10	Champ N8B
Alternate	AC 45L	AL AGR 42
Spark Plug Gap	.035"	.023" to .025"
Firing Order	1-8-4-3-6-5-7-2	1-3-4-2
Distributor—Make and Model	Delco-Remy 1110887	Lucas DM-2
Breaker Gap	.016"	.014" to .016"
Cam Angle	26° to 33°	60° ± 3°
Timing—Crankshaft Degrees	5° BTC	11° BTC
Adv Deg—Centrif—Vac	36-20	14-24
Adv Begins—Ends—Eng rpm	600-3800	1200-3400
Battery—Volts, Terminal Ground	12, Negative	12, Positive
VALVES		
Size and Material ..... Int	1.787", Sil 1	1-3/8", Sil 1
Exh	1.406", 2112N	1-3/16", XB
Tappet Clr—Seat Angle ..... Int	Hyd. Lifters, 30°	.015" C, 45°
Exh	Hyd. Lifters, 45°	.015" C, 45°
CARBURETOR		
Make, Model	Car WCFB-2593-SA	Zenith 30-VIG-10
Type	DD 4 Barrel	Sgl DD
Float Level	Pri 1/8"; Sec 3/16" (1)	NA
Choke Control	Automatic	Manual
TRANSMISSION AXLE RATIO		
Conventional Axle Ratio	Std. 4.10	Std. 4.22
Overdrive Axle Ratio	Opt. 4.10	
Automatic Axle Ratio	Opt. 3.15	
Make Automatic (see page 30)	Hydra-Matic	None
CAPACITY		
Oil (Refill) ..... (qt)	5	4
Water (includes heater) .... (qt)	20	8
Conventional Transmission. (pt)	4 (2)	5.5
Auto. Transmission (Refill). (qt)	11.5	
Rear Axle ..... (pt)	4	2
Gasoline ..... (gal)	20	10.5
GENERAL DATA (Four-Door Sedan)		
Wheelbase ..... (in)	121-1/4	85
Over-All Lgth Incl Bumpers. (in)	209-1/4 (3)	149-1/2
Shipping Weight ..... (lb)	3597	1835
Tire Size—Recm Press ..... (lb)	8.00 x 14-24-24	5.20x13-24-22

(1) Distance between machined surface of bowl cover and nearest point on float.
(2) 4 pints with overdrive transmission.
(3) 219-1/4" over-all with optional Continental tire.

CAR MODEL	"88"	Super "88"	Ninety-Eight
ENGINE			
No. Cyl-Head Type	V-8-I	V-8-I	V-8-I
Bore and Stroke (in)	4 x 3-11/16	4 x 3-11/16	4 x 3-11/16
Displacement (cu in)	370.7	370.7	370.7
AMA Horsepower	51	51	51
Max Horsepower @ rpm	277 @ 4400 (1)	277 @ 4400 (1)	277 @ 4400 (1)
Max Torque, lb-ft @ rpm	400 @ 2800 (1)	400 @ 2800 (1)	400 @ 2800 (1)
Max bmep, lb/sq in	162.7	162.7	162.7
Compression Ratio	9.5 (1)	9.5 (1)	9.5 (1)
IGNITION			
Spark Plug—Factory Eqpt	AC 44	AC 44	AC 44
Alternate		Champ J-8, AL AR 42	
Spark Plug Gap	.030"	.030"	.030"
Firing Order		1-8-7-3-6-5-4-2	
Distributor—Make and Model		Delco-Remy 1110883	
Breaker Gap	.016"	.016"	.016"
Cam Angle	26° to 33°	26° to 33°	26° to 33°
Timing—Crankshaft Degrees	5° BTC at 850 rpm with vacuum disconnected		
Adv Deg—Centrif—Vac	24-20	24-20	24-20
Adv Begins—Ends—Eng rpm	625-4400	625-4400	625-4400
Battery—Volts, Terminal Ground	12, Negative	12, Negative	12, Negative
VALVES			
Size and Material Int	1-3/4", SAE 3140 or SAE 8645		
Exh	1-9/16", 21-4N		
Tappet Clr—Seat Angle Int	Hydraulic Lifters, 45°		
Exh	Hydraulic Lifters, 45°		
CARBURETOR			
Make, Model	RP 4GC	RP 4GC	RP 4GC
Type	DD 4 Barrel	DD 4 Barrel	DD 4 Barrel
Float Level	1-5/8" (2)	1-5/8" (2)	1-5/8" (2)
Choke Control	Automatic	Automatic	Automatic
TRANSMISSION **AXLE RATIO**			
Conventional Axle Ratio	Std. 3.64	Std. 3.64	
Overdrive Axle Ratio			
Automatic Axle Ratio	Opt. 3.23	Opt. 3.42	Std. 3.42
Make Automatic (see page 30)	Hydra-Matic	Hydra-Matic	Hydra-Matic
CAPACITY			
Oil (Refill) (qt)	5	5	5
Water (includes heater) (qt)	21	21	21
Conventional Transmission (pt)	2.5	2.5	
Auto. Transmission (Refill) (qt)	11	11	11
Rear Axle (pt)	5	5	5
Gasoline (gal)	20	20	20
GENERAL DATA (Four-Door Sedan)			
Wheelbase (in)	122	122	126
Over-All Lgth Incl Bumpers (in)	208.2	208.2	216.7
Shipping Weight (lb)	4000	4049	4347
Tire Size—Recm Press (lb)	8.50x14-22-20 (3)	8.50x14-22-20 (3)	8.50x14-22-20 (3)

(1) Power package engine with 10.0 comp. ratio and three 2 barrel carburetors optional. 300 bhp @ 4600 rpm, 415 lb-ft @ 3000 rpm.
(2) From bowl cover gasket to bottom of float with bowl cover inverted.
(3) 9.00x14-22-20 tires optional.

PACKARD

CAR MODEL	
ENGINE	
No. Cyl-Head Type	V-8-I
Bore and Stroke (in)	3-9/16 x 3-5/8
Displacement (cu in)	289
AMA Horsepower	40.6
Max Horsepower @ rpm	275 @ 4800 (1)
Max Torque, lb-ft @ rpm	333 @ 3200
Max bmep, lb/sq in	173.8
Compression Ratio	7.8 supercharged (1)
IGNITION	
Spark Plug—Factory Eqpt	Champ H-10
Alternate	AC 45L, AL ARL 5
Spark Plug Gap	.033" to .038"
Firing Order	1-8-4-3-6-5-7-2
Distributor—Make and Model	Delco-Remy 1110864
Breaker Gap	.013" to .018"
Cam Angle	28° to 34°
Timing—Crankshaft Degrees	4° BTC
Adv Deg—Centrif—Vac	24-16
Adv Begins—Ends—Eng rpm	600-2250
Battery—Volts, Terminal Ground	12, Negative
VALVES	
Size and Material—Int	1-21/32", SAE 8645
Exh	1-17/32", SAE 2112N
Tappet Clr—Seat Angle—Int	.023" to .025" H. 45°
Exh	.023" to .025" H. 45°
CARBURETOR	
Make, Model	Strom WW6-121
Type	Dual DD
Float Level	7/32" (2)
Choke Control	Automatic
TRANSMISSION — **AXLE RATIO**	
Conventional — Axle Ratio	
Overdrive — Axle Ratio	Std. 4.27
Automatic — Axle Ratio	Opt. 3.31
Make Automatic (see page 30)	Flightomatic
CAPACITY	
Oil (Refill) (qt)	5
Water (includes heater) (qt)	18.5
Overdrive Transmission (pt)	3.7
Auto. Transmission (Refill) (qt)	9.5
Rear Axle (pt)	3
Gasoline (gal)	18
GENERAL DATA (Four-Door Sedan)	
Wheelbase (in)	120.5
Over-All Lgth Incl Bumpers (in)	211.8
Shipping Weight (lb)	NA
Tire Size—Recm Press (lb)	7.60x15-24-20

(1) A single stage supercharger with a variable speed drive is used.
(2) Between top of float chamber without gasket to top of float.

CAR MODEL	Plaza, Savoy and Belvedere 6	Plaza V-8	Savoy and Belvedere V-8
ENGINE			
No. Cyl-Head Type	6-L	V-8-I	V-8-I
Bore and Stroke (in)	3.25 x 4.63	3.75 x 3.13	3.91 x 3.13
Displacement (cu in)	230	277 (1)	301 (1)
AMA Horsepower	25.4	45.0 (1)	48.9
Max Horsepower @ rpm	132 @ 3600	197 @ 4400 (1)	215 @ 4400 (1)
Max Torque, lb-ft @ rpm	205 @ 1600	270 @ 2400 (1)	285 @ 2800 (1)
Max bmep, lb/sq in	134.4	147.0	142.8
Compression Ratio	8.0	8.0	8.5
IGNITION			
Spark Plug—Factory Eqpt	AL AR 51	AL AR 52	AL AR 52
Alternate	Champ J-8, AC R 45	Champ XJ-18Y, AC R 45S	
Spark Plug Gap	.035"	.035"	.035"
Firing Order	1-5-3-6-2-4	1-8-4-3-6-5-7-2	
Distributor—Make and Model	AL IBR-4001	AL IBP-4003-C (1)	AL IBP-4003 (1)
Breaker Gap	.017"	.017"	.017"
Cam Angle	29° to 32°	29° to 32°	29° to 32°
Timing—Crankshaft Degrees	TDC	4° BTC	10° BTC
Adv Deg—Centrif—Vac	17-19	30-25	19-26
Adv Begins—Ends—Eng rpm	700-3600	700-4300	1000-4400
Battery—Volts, Terminal Ground	12, Negative	12, Negative	12, Negative
VALVES			
Size and Material—Int	1.53", Sil F	1.84", Sil F	
Exh	1.41", XCR	1.56", XCR	
Tappet Clr—Seat Angle—Int	.010" H, 45°	.008" H, 45°	.008" H, 45°
Exh	.010" H, 45°	.018" H, 45°	.018" H, 45°
CARBURETOR			
Make, Model	Car BBS-2569S	Car BBD-2514S or Strom WW15-23	
Type	Sgl DD	Dual DD	Dual DD
Float Level	9/32" (2)	9/32" (2)	9/32" (2)
Choke Control	Automatic	Automatic	Automatic
TRANSMISSION AXLE RATIO			
Conventional Axle Ratio	Std. 3.73	Std. 3.54	Std. 3.54
Overdrive Axle Ratio	Opt. 4.10	Opt. 3.91	Opt. 3.91
Automatic Axle Ratio	Opt. 3.73	Opt. 3.54	Opt. 3.54 (3)
Make Automatic (see page 30)	PowerFlite	PowerFlite	PowerFlite (3)
CAPACITY			
Oil (Refill) (qt)	5	5	5
Water (includes heater) (qt)	14	21	21
Conventional Transmission. (pt)	2-3/4 (4)	2-3/4 (4)	2-3/4 (4)
Auto. Transmission (Refill) (qt)	10	10	10 (5)
Rear Axle (pt)	3-1/4	3-1/2	3-1/2
Gasoline (gal)	20	20	20
GENERAL DATA (Four-Door Sedan)			
Wheelbase (in)	118	118	118
Over-All Lgth Incl Bumpers. (in)	204.6	204.6	204.6
Shipping Weight (lb)	3265	3405	3415
Tire Size—Recm Press. (lb)	7.50x14-22-22	7.50x14-24-22	7.50x14-24-22

(1) With power package consisting of 4 barrel Carter WCFB-2530S carburetor, dual exhaust and special Auto-Lite IBP-4003-A distributor, 235 bhp @ 4400, 305 lb-ft at 2800. Fury model uses 318 cu. in. engine, 9.25 comp. ratio, 290 bhp @ 5200, 325 lb-ft @ 3600.
(2) From top of float bowl without gasket to top of float.
(3) 3.36 standard with optional TorqueFlite transmission.
(4) 3/4 pint additional with overdrive.
(5) 9 quarts refill with optional TorqueFlite transmission.

PONTIAC

CAR MODEL	Chieftain	Super Chief	Star Chief
ENGINE			
No. Cyl-Head Type	V-8-I	V-8-I	V-8-I
Bore and Stroke (in)	3.94 x 3.56	3.94 x 3.56	3.94 x 3.56
Displacement (cu in)	347	347	347
AMA Horsepower	49.6	49.6	49.6
Max Horsepower @ rpm	252 @ 4600 (1)	270 @ 4800 (1)	270 @ 4800 (1)
Max Torque, lb-ft @ rpm	354 @ 2400 (1)	359 @ 2800 (1)	359 @ 2800 (1)
Max bmep, lb/sq in	153.8	156.0	156.0
Compression Ratio	10.0 (1)	10.0 (1)	10.0 (1)
IGNITION			
Spark Plug—Factory Eqpt	AC 45	AC 45	AC 45
Alternate		AL AR 52, Champ J-8	
Spark Plug Gap	.033" to .038"	.033" to .038"	.033" to .038"
Firing Order		1-8-4-3-6-5-7-2	
Distributor—Make and Model		Delco-Remy 1110871	
Breaker Gap	.016"	.016"	.016"
Cam Angle	28° to 32°	28° to 32°	28° to 32°
Timing—Crankshaft Degrees	6° BTC	6° BTC	6° BTC
Adv Deg—Centrif—Vac	26-22	26-22	26-22
Adv Begins—Ends—Eng rpm	650-4250	650-4250	650-4250
Battery—Volts, Terminal Ground	12, Negative	12, Negative	12, Negative
VALVES			
Size and Material—Int	1.88", GM 8440 Aluminum Treated		
Exh	1.60", MXCR Aluminum Treated		
Tappet Clr—Seat Angle—Int	Hydraulic Lifters, 30°		
Exh	Hydraulic Lifters, 45°		
CARBURETOR			
Make, Model	RP 7009831	RP 7009830 or Car AFB-2506S	
Type	Dual DD	DD 4 Barrel	DD 4 Barrel
Float Level	1-15/64" (2)	(3)	(3)
Choke Control	Automatic	Automatic	Automatic
TRANSMISSION **AXLE RATIO**			
Conventional Axle Ratio	Std. 3.42 (4)	Std. 3.42 (4)	Std. 3.42 (4)
Overdrive Axle Ratio			
Automatic Axle Ratio	Opt. 3.23 (5)	Opt. 3.23 (5)	Opt. 3.23 (5)
Make Automatic (see page 30)	Hydra-Matic	Hydra-Matic	Hydra-Matic
CAPACITY			
Oil (Refill) (qt)	5	5	5
Water (includes heater) (qt)	23	23	23
Conventional Transmission. (pt)	2.5	2.5	2.5
Auto. Transmission (Refill) (qt)	9	9	9
Rear Axle (pt)	5	5	5
Gasoline (gal)	20	20	20
GENERAL DATA (Four-Door Sedan)			
Wheelbase (in)	122.0	122.0	124.0
Over-All Lgth Incl Bumpers. (in)	206.8	206.8	213.8
Shipping Weight (lb)	3670 (6)	3695 (6)	3740 (6)
Tire Size—Recm Press (lb)	7.50x14-22-22 (7)	8.00x14-22-22 (7)	

(1) Power data is given for 10.0 comp. ratio engine which is equipped with Hydra-Matic transmission. An optional comp. ratio of 8.5 is available with synchromesh transmission. BHP 227 @ 4600 for Chieftain, 244 @ 4800 for Super Chief and Star Chief with synchromesh transmission engine.
(2) From bottom of float to bowl cover gasket with bowl cover inverted.
(3) Rochester: 1-3/8" between bottom of float and bowl cover gasket.
Carter: Not available.
(4) 3.64 axle ratio optional.
(5) 3.08 axle ratio optional.
(6) Shipping weight includes Hydra-Matic transmission.
(7) 8.00x14-22-22 and 8.50x14-22-22 optional on Chieftain; 8.50x14-22-22 optional on Super Chief and Star Chief.

CAR MODEL	Rambler 6	Rambler V-8
ENGINE		
No. Cyl-Head Type	6-I	V-8-I
Bore and Stroke (in)	3-1/8 x 4-1/4	3-1/2 x 3-1/4
Displacement (cu in)	195.6	250
AMA Horsepower	23.44	39.2
Max Horsepower @ rpm	125 @ 4200 (1)	190 @ 4900 (2)
Max Torque, lb-ft @ rpm	175 @ 1600 (1)	240 @ 2500 (2)
Max bmep, lb/sq in	134.9	144.8
Compression Ratio	8.25	8.0 (2)
IGNITION		
Spark Plug—Factory Eqpt	AL AL-7J, Champ H-10	AL AL-7J, Champ H-10
Alternate	AC 45L	AC 45L
Spark Plug Gap	.035"	.035"
Firing Order	1-5-3-6-2-4	1-8-4-3-6-5-7-2
Distributor—Make and Model	DR 1110244	DR 1110884
Breaker Gap	.016"	.016"
Cam Angle	28° to 35°	26° to 33°
Timing—Crankshaft Degrees	TDC	5° BTC
Adv Deg—Centrif—Vac	26-15	38-24
Adv Begins—Ends—Eng rpm	700-3400	650-3400
Battery—Volts, Terminal Ground	12, Negative	12, Negative
VALVES		
Size and Material—Int	1.594", Sil 1 or XB	1.787", Sil 1 or XB
Exh	1.343", 2112N	1.406", 2112N
Tappet Clr—Seat Angle—Int	.012" H, 45°	.012" H, 30°
Exh	.016" H, 45°	.014" H, 45°
CARBURETOR		
Make, Model	Car AS-2580-S (1)	Car WGD-2352-SA
Type	Sgl DD (1)	Dual DD
Float Level	1/4" (3)	7/32" (3)
Choke Control	Automatic	Automatic
TRANSMISSION — **AXLE RATIO**		
Conventional — Axle Ratio	Std. 3.77 (4)	Std. 4.1 (4)
Overdrive — Axle Ratio	Opt. 4.4 (4)	Opt. 4.4 (4)
Automatic — Axle Ratio	Opt. 3.31	Opt. 3.54
Make Automatic (see page 30)	Dual Range Hydra-Matic	Hydra-Matic
CAPACITY		
Oil (Refill) (qt)	4	5
Water (includes heater) (qt)	11	21
Conventional Transmission (pt)	2.25 (5)	4 (5)
Auto. Transmission (Refill) (qt)	8.5	11.5
Rear Axle (pt)	3	4
Gasoline (gal)	20	20
GENERAL DATA (Four-Door Sedan)		
Wheelbase (in)	108	108
Over-All Lgth Incl Bumpers (in)	191.1 (6)	191.1 (6)
Shipping Weight (lb)	2891	3179
Tire Size—Recm Press (lb)	6.40x15-24-24 (7)	6.70x15-24-24

(1) 135 bhp @ 4500 rpm, 180 lb-ft @ 1800 rpm with optional Carter WCD-2350S DD carburetor.
(2) 327 cu. in. 9.5 comp. ratio V-8 engine used in Rebel. 255 bhp @ 4700 rpm with 4 barrel carburetor. 288 bhp with Bendix fuel injection.
(3) Distance between top of float and machined surface of bowl cover.
(4) 4.4 ratio optional with conventional transmission and 4.1 optional with overdrive.
(5) 3-1/2 pints with overdrive on 6. 4 pints on V-8.
(6) 198.9 with optional Continental tire.
(7) 6.70x15 tires optional.

STUDEBAKER

CAR MODEL	Champion	Commander	President & Classic
ENGINE			
No. Cyl-Head Type	6-L	V-8-I	V-8-I
Bore and Stroke (in)	3 x 4-3/8	3-9/16 x 3-1/4	3-9/16 x 3-5/8
Displacement (cu in)	185.6	259.2	289
AMA Horsepower	21.6	40.6	40.6
Max Horsepower @ rpm	101 @ 4000	180 @ 4500 (1)	210 @ 4500 (2)
Max Torque, lb-ft @ rpm	152 @ 1800	260 @ 2800 (1)	300 @ 2800 (2)
Max bmep, lb/sq in	123.5	151.3	156.5
Compression Ratio	7.8	8.3	8.3
IGNITION			
Spark Plug—Factory Eqpt	Champ J-7	Champ H-11	Champ H-11
Alternate	AC 44, AL AR 5	AC 45L, AL ARL 82	
Spark Plug Gap	.028" to .033"	.033" to .038"	.033" to .038"
Firing Order	1-5-3-6-2-4	1-8-4-3-6-5-7-2	
Distributor—Make and Model	AL IAT-4201	DR 1110864	
Breaker Gap	.020"	.013" to .018"	.013" to .018"
Cam Angle	38° to 40°	28° to 34°	28° to 34°
Timing—Crankshaft Degrees	2° BTC	4° BTC	4° BTC
Adv Deg—Centrif—Vac	14-18	24-16	24-16
Adv Begins—Ends—Eng rpm	800-2800	600-2250	600-2250
Battery—Volts, Terminal Ground	12, Negative	12, Negative	12, Negative
VALVES			
Size and Material—Int	1-11/32", CNS	1-21/32", SAE 8645	
Exh	1-9/32", 2112	1-17/32", 2112N	
Tappet Clr—Seat Angle—Int	.016" C, 45°	.026" C or .024" H, 45°	
Exh	.016" C, 45°	.026" C or .024" H, 45°	
CARBURETOR			
Make, Model	Car WE-2417S	Strom WW6-117	Strom WW6-117A
Type	Sgl DD	Dual DD	Dual DD
Float Level	3/8" (3)	3/16" (4)	3/16" (4)
Choke Control	Automatic	Automatic	Automatic
TRANSMISSION AXLE RATIO			
Conventional Axle Ratio	Std. 4.10	Std. 3.54	Std. 3.54
Overdrive Axle Ratio	Opt. 4.56	Opt. 3.92	Opt. 3.92 (5)
Automatic Axle Ratio	Opt. 3.54	Opt. 3.31	Opt. 3.31
Make Automatic (see page 30)	Flightomatic	Flightomatic	Flightomatic
CAPACITY			
Oil (Refill) (qt)	5	5	5
Water (includes heater) (qt)	12.5	18.5	18.5
Conventional Transmission (pt)	1.6 (6)	2.4 (6)	2.4 (6)
Auto. Transmission (Refill) (qt)	9	9	9
Rear Axle (pt)	2.5	3	3
Gasoline (gal)	18	18	18
GENERAL DATA (Four-Door Sedan)			
Wheelbase (in)	116-1/2 (7)	116-1/2 (7)	116-1/2 (7)
Over-All Lgth Incl Bumpers (in)	202-3/8 (8)	202-3/8 (8)	200-3/4 (8)
Shipping Weight (lb)	2810	3140	3205
Tire Size—Recm Press (lb)	6.40x15-24-20	6.70x15-24-22	6.70x15-24-20

(1) 195 bhp @ 4500 rpm, 265 lb-ft @ 2800 rpm with four-barrel carburetor.
(2) 225 bhp @ 4500 rpm, 305 lb-ft @ 3000 rpm standard on Classic and Silver Hawk models and optional on others. 275 bhp @ 4800 rpm, 333 lb-ft @ 3200 rpm with supercharger and 7.8 comp. ratio on Golden Hawk.
(3) Between boss on bowl cover and far edge of float seam.
(4) Between top of float chamber without gasket to top of float.
(5) 4.09 axle ratio used on Classic.
(6) 2.75 with overdrive on Champion, 3.4 on V-8's.
(7) Classic four-door sedan and coupes 120-1/2.
(8) 203-15/16" over-all length of coupes. Classic 206-3/8".

APPROXIMATE ANALYSIS OF VALVE, VALVE FACING AND SEAT INSERT MATERIALS IN GENERAL USE

EXHAUST VALVE STEELS

ELEMENT	SIL I [1]	SIL XB [1]	XCR [2]	XCR MOD. [2]	2112* [3]	SIL 10 [1]	SIL X-142 (TPA) [1]	FORD CAST [3]	B-312 [1]	21-4NS [1]	2155 [1]
	%	%	%	%	%	%	%	%	%	%	%
CHROMIUM (CR)	8.5	21.0	23.7	23.8	21.0	19.0	14.0	15.0	19.7	21.0	21.0
NICKEL (NI)	—	1.5	4.7	3.7	12.0	8.0	14.0	15.0	2.2	3.7	5.0
CARBON (C)	0.45	0.75	0.45	0.38	0.25	0.38	0.45	1.00	0.60	0.60	0.20
SILICON (SI)	3.2	2.0	1.0 MAX	0.8	0.8	2.8	0.6	3.5	0.5 MAX	0.25 MAX	0.4
MANGANESE (MN)	—	0.4	1.0 MAX	3.7	1.4	1.0	0.7	0.8	8.0	9.0	5.5
MOLYBDENUM (MO)	—	—	2.7	1.3	—	—	0.5 MAX	0.4	—	—	—
TUNGSTEN (W)	—	—	—	—	—	—	2.5	—	—	—	—
OTHER	—	—	—	—	—	—	—	COPPER 0.25	NITROGEN 0.25 MAX	NITROGEN 0.4	NITROGEN 0.28
	—	—	—	—	—	—	—	—	—	SULFUR 0.07	—
IRON (FE)	BAL.	BAL.	BAL.	BAL.	BAL.	BAL.	BAL.	BAL.	BAL.	BAL.	BAL.

INTAKE VALVE STEELS

ELEMENT	SIL F V STEEL	SAE 3140	SAE 5147	SAE 6150 [1]	SAE** 8645	SAE** 9442
	%	%	%	%	%	%
CHROMIUM (CR)	2.9	0.7	1.1	1.0	0.5	0.4
NICKEL (NI)	—	1.3	—	—	0.6	0.5
CARBON (C)	0.40	0.40	0.48	0.50	0.46	0.43
SILICON (SI)	4.0	0.3	0.3	0.3	0.3	0.3
MANGANESE (MN)	0.4	0.8	0.9	0.8	0.9	1.2
MOLYBDENUM (MO)	—	—	—	—	0.2	0.1
TUNGSTEN (W)	—	—	—	—	—	—
OTHER	—	—	—	VANADIUM 0.15 MIN	—	—
	—	—	—	—	—	—
IRON (FE)	BAL.	BAL.	BAL.	BAL.	BAL.	BAL.

FACING MATERIALS

ELEMENT	STELLITE NO.6	STELLITE F	EATONITE [4]	X-782 [4]	NICHROME (BRIGHT RAY)
	%	%	%	%	%
CHROMIUM (CR)	27.0	24.0	29.0	26.0	20.0
NICKEL (NI)	—	24.0	39.0	BAL.	BAL.
CARBON (C)	1.25	1.60	2.40	2.00	0.20
SILICON (SI)	2.7	1.3	1.0 MAX	0.4	0.3 MAX
MANGANESE (MN)	—	0.3	—	0.5 MAX	0.8
MOLYBDENUM (MO)	—	—	—	—	—
TUNGSTEN (W)	4.0	12.5	15.0	9.0	—
COBALT (CO)	63.0	37.0	10.0	1.0 MAX	—
OTHER	—	—	—	—	—
IRON (FE)	2.0	0.7	8.0 MAX	40 MAX	1.0 MAX

SEAT INSERT MATERIALS

ELEMENT	STELLITE NO.6 [4]	EATONITE [4]	CHROME-MOLY HARD CI. [5]	SPARTA STEEL	SAE 71360 [1]	SIL XB [1]	VSM
	%	%	%	%	%	%	%
CHROMIUM (CR)	27.0	29.0	3.0	5.2	3.5	21.0	3.0
NICKEL (NI)	—	39.0	—	—	—	1.5	—
CARBON (C)	1.25	2.40	2.20	1.00	0.55	0.75	0.65
SILICON (SI)	2.7	1.0 MAX	1.8	0.4	0.2	2.0	1.0
MANGANESE (MN)	—	—	0.6	0.5	0.3 MAX	0.4	0.6
MOLYBDENUM (MO)	—	—	3.5	1.3	—	—	5.0
TUNGSTEN (W)	4.0	15.0	—	—	14.0	—	—
COBALT (CO)	63.0	10.0	—	—	—	—	—
OTHER	—	—	—	VANADIUM 0.2	—	—	—
IRON (FE)	2.0	8.0 MAX	BAL.	BAL.	BAL.	BAL.	BAL.

NOTES-1. FERRITIC OR MARTENSITIC (MAGNETIC)
2. SIGMA PHASE (SLIGHTLY MAGNETIC)
3. AUSTENITIC (NON MAGNETIC)
4. NON FERROUS ALLOY (NON MAGNETIC)
5. CAST IRON (MAGNETIC)
* 2112N HAS SAME COMPOSITION WITH 0.10 TO 0.20% NITROGEN
** FORMERLY NATIONAL EMERGENCY STEEL WITH PREFIX "NE" INSTEAD OF "SAE"

ETHYL CORPORATION

		← HOTTER →					
AC	10 mm ¼" Reach	M-8					
	14 mm ⅜" Reach	48 48X		46-5 46 R46		45 R45 R45S*	44-5
	14 mm ½" Reach		47L			45L	
	14 mm ¾" Reach			46XL	45XL R45XL	R45XLS*	
	18 mm 60° Seat						85T R85T
	18 mm Std.	88			86T 86		
CHAMPION	10 mm ¼" Reach		Y-8			Y-6	
	14 mm ⅜" Reach	J-14		J-12	J-11		J-8 J-18Y*
	14 mm ½" Reach			H-12	H-11		H-10
	14 mm ¾" Reach					N-18	
	18 mm 60° Seat					870	
	18 mm Std.	10 Com	D-21 9		8 Com		7
AUTOLITE	10 mm ¼" Reach			P6 PR6			
	14 mm ⅜" Reach	A11	AR10 AT10	A9	AR80 AR8 AR82*		A7
	14 mm ½" Reach	AL11		AL9	ARL8 ARL82*		AL7
	14 mm ¾" Reach			4GS125			4GS150 AGR82*
	18 mm 60° Seat						BRF7 BRF82*
	18 mm Std.		BT10 BR10	BT9	BT8 BR8		

*Plugs with extended gap design

RANGE COMPARISONS

COLDER →		
104	10 mm ¼" Reach	AC
44 R44 — 43-5 43-5R — 43 R43 — 42	14 mm ⅜" Reach	
43L	14 mm 7/16" Reach	
R44XLS*	14 mm ¾" Reach	
84T	18 mm 60° Seat	
	18 mm Std.	
Y-4A	10 mm ¼" Reach	CHAMPION
J-7 — XJ12Y* J-6 — J-5 — J-2	14 mm ⅜" Reach	
H-9 — H-8	14 mm 7/16" Reach	
N-8 N-8B — N-16Y* — N-5 NA-8 — XN12Y* — N-3 NA-10	14 mm ¾" Reach	
860 — F-10	18 mm 60° Seat	
6 Com — D-10 — 5 Com — 4 Com	18 mm Std.	
P4 PR4	10 mm ¼" Reach	AUTO-LITE
AT6 — AR51 AR 5 AR52* — A5 — AR41 AT4 AR42* — A3 AR32*	14 mm ⅜" Reach	
AL5	14 mm 7/16" Reach	
AGR51 — AG5 AGR52* — AGR41 AGR42* — AGR31 AGR32*	14 mm ¾" Reach	
BTF6 BTF42* — BTF3	18 mm 60° Seat	
BT6 — BT4 BR4 — BT3	18 mm Std.	

AUTOMATIC AND SEMI-AUTOMATIC TRANSMISSIONS

Dynaflow (Buick)

The Dynaflow transmission consists of a five-element torque converter and a multiple pinion planetary gearset providing low and reverse ratios. The two turbine elements of the converter are interconnected through a planetary gearset of 1.6:1 ratio. The stator vanes are pivoted in the vane carrier and their pitch is controlled by a hydraulic piston in response to accelerator position. The maximum torque multiplication of the converter is 3.5 in the high stator pitch and 3.1 in the low pitch position. No additional gearing, other than the internal gearing between the turbines, is used for normal forward driving. The drive is always through the converter. Low range 1.82:1 gear ratio can be manually engaged at any throttle position for extra pulling power and engine braking.

Flightomatic (Studebaker-Packard Corporation)

This transmission is used on Studebaker and Packard automobiles and is composed of a three-element torque converter and a multiple pinion compound planetary gearset to produce three forward speeds and reverse. The drive is always through the converter which has a maximum torque multiplication of 2.15:1. Normal drive starts through the torque converter and low gear ratio (2.40:1), shifts to torque converter plus intermediate ratio (1.47:1) and then shifts to converter only. The shifts are automatic and vary with car speed and accelerator position. The transmission can be manually locked in low range for added pulling power and engine braking.

Fordomatic, Merc-O-Matic and Turbo-Drive (Ford, Mercury, Lincoln and Continental)

This transmission is composed of a three-element torque converter and a multiple pinion planetary gear system to produce three forward speeds and reverse. The drive is always through the converter which has a maximum torque multiplication of 2.1:1. Normal drive starts through the torque converter and intermediate gear ratio (1.47:1) and automatically shifts to converter only, depending on throttle opening and car speed. Low gear (2.40:1 gear ratio) can be engaged for added acceleration from a standstill or from low vehicle speeds by depressing the accelerator to the floor. The transmission may be manually locked in low range for added pulling power or engine braking.

Hydra-Matic (Detroit Transmission Division GMC)

The Dual-Range Hydra-Matic is available on Rambler 6. This transmission consists of a fluid coupling with three planetary gearsets providing four forward speeds and reverse. The shifts are automatic and vary with car speed and accelerator position. Ratios are as follows: first, 3.82:1; second, 2.63:1; third, 1.45:1; fourth, 1:1.

The Hydra-Matic with two fluid couplings is available on Cadillac, Hudson, Nash, Oldsmobile, Pontiac and Rambler V-8. This transmission consists of two fluid couplings and three planetary gearsets providing four forward speeds and reverse. The large fluid coupling is used for the transmission of power as in the original Hydra-Matic. The small fluid coupling replaces the clutch unit in the forward planetary gearset and the front and rear bands have been replaced by sprag type clutches. The shifts are automatic and vary with car speed and accelerator position. Ratios are as follows: first, 3.97:1; second, 2.55:1; third, 1.55:1; fourth, 1:1.

Overdrive (Borg Warner Corporation)

Available on Chevrolet, Ford, Hudson, Mercury, Nash, Packard, Plymouth, Rambler and Studebaker. It consists of a planetary gearset and one-way clutch used behind a conventional three-speed transmission. The shift is controlled electrically according to car speed and is actuated by the accelerator. The driving ratio reduction is approximately 30%.

PowerFlite (Chrysler Corporation)

This transmission is used on DeSoto, Dodge and Plymouth in both V-8 and six-cylinder cars. It consists of a three-element torque converter and two planetary gearsets providing low and reverse ratios. The drive is always through the converter which has a maximum torque multiplication of 2.7:1. Normal drive starts through the torque converter and low gear ratio (1.72:1) and automatically shifts to converter only, depending on throttle opening and car speed. The transmission can be manually locked in low range for extra pulling power and engine braking.

Powerglide (Chevrolet)

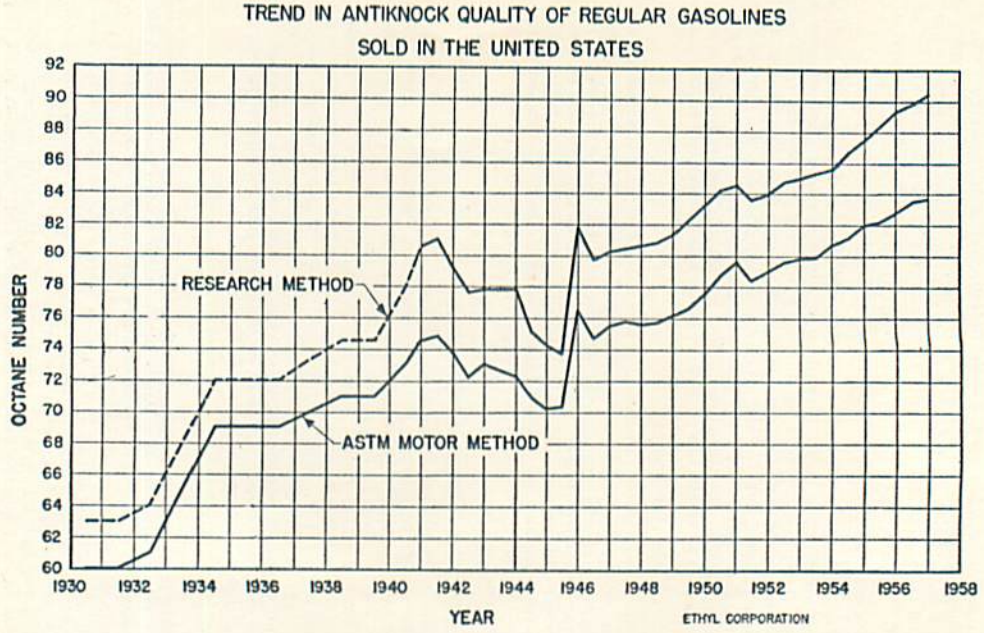
This transmission consists of a three-element torque converter with a multiple pinion planetary gearset providing low and reverse ratios. The drive is always through the converter which has a maximum torque multiplication of 2.1:1. Normal drive starts through the torque converter and low gear ratio (1.82:1) and automatically shifts to converter only, depending on throttle opening and car speed. The transmission can be manually locked in low range for extra pulling power and engine braking.

TorqueFlite (Chrysler Corporation)

This transmission is used on Chrysler, DeSoto, Dodge, Imperial and Plymouth. It consists of a three-element torque converter and two planetary gearsets providing three forward speeds and reverse. The drive is always through the converter which has a maximum torque multiplication of 2.3 to 2.7, depending on the blade angle of the particular converter used. Normal drive starts through the converter and low gear ratio (2.45:1), shifts to torque converter plus intermediate ratio (1.45:1) and then shifts to converter only. The shifts are automatic and vary with car speed and accelerator position. The transmission may be manually locked in low or intermediate gear for added pulling power or engine braking.

Turboglide (Chevrolet)

This transmission consists of a five-element torque converter consisting of three turbines, a variable pitch stator and a conventional torque converter pump. The three turbines are connected individually to the output shaft through the elements of two simple planetary gearsets. The stator vanes are pivoted in the vane carrier and their pitch is controlled by a hydraulic piston in response to accelerator position. The maximum torque multiplication of the converter is 4.3:1 in the high stator pitch position and 3.8 in the low position. No additional gearing other than the internal gearing between the turbines and the output shaft is provided. A hydraulic retarder is used for downhill braking.


TREND IN ANTIKNOCK QUALITY OF REGULAR GASOLINES
SOLD IN THE UNITED STATES
OCTANE NUMBER
92
90
88
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RESEARCH METHOD
ASTM MOTOR METHOD
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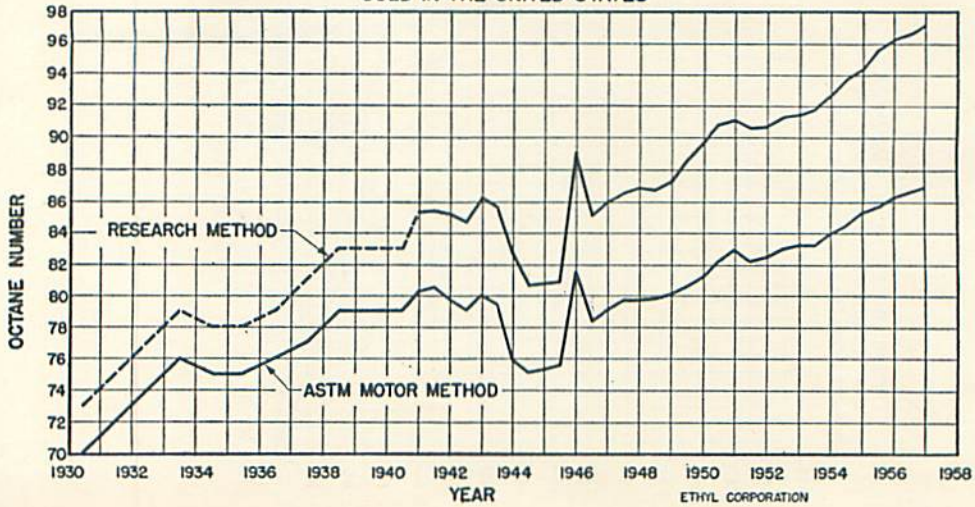
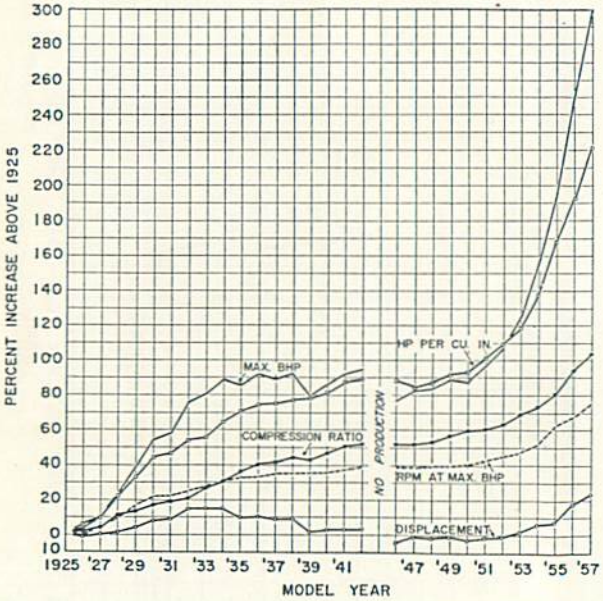
ETHYL CORPORATION

TREND IN ANTIKNOCK QUALITY OF PREMIUM GASOLINES
SOLD IN THE UNITED STATES



TRENDS OF AMERICAN PASSENGER CAR ENGINE DESIGN SINCE 1925

AVERAGES OF VALUES LISTED IN TRADE PUBLICATIONS



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